

Serial No.: 08/629,547
Docket No.: ATS-032/REISSUE

REISSUE APPLICATION

Page 7, column 7, lines ~~2, 8, 12, 19, 30~~ and 31,
between "radial" and "surface 5g", insert --engaging--.

IN THE CLAIMS:

Please delete claims 13 to 15, 17 to 27, ~~29, 30,~~ and 32
to 42 without prejudice or disclaimer, and amend claims 1 to 12,
16, 28, and 31 as follows:

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1. (Amended) A flywheel assembly for a power
transmission system for transmitting engine torque [to a
driven unit], comprising:

4 an elastic plate secured to a crankshaft to rotate
5 therewith;

6 a flywheel body secured to said elastic plate and
7 having an engaging [engageable] surface for engaging with a
8 clutch disc; and

9 a reinforcing member for reinforcing said elastic plate
10 at a portion of said elastic plate which is secured to said
11 crankshaft;

12 said elastic plate having an axial rigidity in the
13 range of 600 kg/mm to 2200 kg/mm so as to ensure
14 transmission of engine torque through said flywheel assembly
15 [to said driven unit] while decreasing noise produced by a

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16 bending vibration of said crankshaft;

17 wherein each of said elastic plate, said flywheel body
18 and said reinforcing member comprises a first portion, said
19 first portion of said flywheel body being placed axially
20 between said first portions of said elastic plate and said
21 reinforcing member, and said first portions of said elastic
22 plate, said flywheel body and said reinforcing member
23 defining clearances for allowing said first portion of said
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Cont 24 flywheel body to move axially between said first portions of
25 said elastic plate and said reinforcing member.

1 2. (Amended) A flywheel assembly as set forth in
2 claim 1, wherein said axial rigidity is in the range of 600
3 kg/mm to 1700 kg/mm.

1 3. (Amended) A flywheel assembly as set forth in
2 claim 2, wherein an axial run-out of said engageable surface
3 when rotated by said crankshaft is no more than 0.1 mm.

1 4. (Amended) A flywheel assembly according to claim
2 1, wherein said reinforcing member (4) and said elastic
3 plate (2) are fastened to said crankshaft (1) by a fastening
4 means (3), and said elastic plate is clamped between said

5 crankshaft and said reinforcing member.

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5. (Amended) A flywheel assembly according to claim
4, wherein said elastic plate is circular and comprises an
outer peripheral portion (2b) surrounding said first portion
of said elastic plate, so that said first portion of said
elastic plate is an inner portion of said elastic plate,
said flywheel body comprises an outer peripheral portion
(5a) which surrounds said first portion of said flywheel
body, so that said first portion of said flywheel body is an
inner portion of said flywheel body, said outer peripheral
portions of said elastic plate and said flywheel body are
fastened together by a second fastening means (6), said
inner portion of said flywheel body comprises an inwardly
facing inside cylindrical surface defining a central
circular hole (5b), said reinforcing member comprises a
cylindrical portion (4a) which is received in said circular
hole (5b) of said flywheel body, and comprises an outwardly
facing outside cylindrical surface surrounded by said
inwardly facing cylindrical surface of said flywheel body,
said first portion of said reinforcing member is in the form
of an outward flange (4b), said first portion of said
flywheel body is [slidably] mounted on said cylindrical

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GH 22 portion of said reinforcing member [so that], and said
Cont 23 cylindrical portion of said reinforcing member is sized to
24 allow said first portion of said flywheel body [is] to slide
25 axially [slidable] between said inner portion of said
26 elastic plate and said outward flange of said reinforcing
27 member.

C3 1 6. (Amended) A flywheel assembly according to claim
cont 2 4, wherein said inner portion of said flywheel body
3 comprises a first surface (5f) which is substantially
4 parallel to said engaging [engageable] surface (5g) and
5 faces toward said elastic plate, and a second surface (5d)
6 which is substantially parallel to said engageable surface
7 and which faces toward said outward flange of said
8 reinforcing member, said inner portion of said elastic plate
9 comprising an abutting surface confronting said first
10 surface of said flywheel body and limiting an axial movement
11 of said inner portion of said flywheel body [elastic plate]
12 by abutting against said first surface of said flywheel
13 body, said outward flange of said reinforcing member
14 comprises an abutting surface confronting said second
15 surface of said flywheel body and limiting the axial
16 movement of said inner portion of said flywheel body by

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17 abutting against said second surface of said flywheel body,
18 an axial distance between said first and second surfaces of
19 said flywheel body is smaller than an axial distance between
20 said abutting surfaces of said elastic member and said
21 reinforcing member.

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1 7. (Amended) A flywheel assembly according to claim
2 6, wherein said second surface (5d) of said inner portion of
3 said flywheel body is located axially between said first
4 surface (5f) and said engaging [engageable] surface (5g) of
5 said flywheel body.

1 8. (Amended) A flywheel assembly for a power
2 transmission system for transmitting engine torque [to a
3 driven unit], comprising:

4 an elastic plate secured to a crankshaft to rotate
5 therewith;

6 a flywheel body secured to said elastic plate and
7 having an engaging [engageable] surface for engaging with a
8 clutch disc; and

9 a reinforcing member for reinforcing said elastic plate
10 at a portion of said elastic plate which is secured to said
11 crankshaft; and

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12 said engaging [engageable] surface having an axial run-
13 out which is equal to or less than 0.1 mm;

14 wherein each of said elastic plate, said flywheel body
15 and said reinforcing member comprises a first portion, said
16 first portion of said flywheel body being placed axially
17 between said first portions of said elastic plate and said
18 reinforcing member, and said first portions of said elastic
19 plate, said flywheel body and said reinforcing member
20 defining clearances for allowing said first portion of said
21 flywheel body to move axially between said first portions of
22 said elastic plate and said reinforcing member.

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1 9. (Amended) A flywheel assembly comprising:
2 a crankshaft [driving shaft] (1) for transmitting
3 torque;

4 a circular elastic plate [member] (2) comprising an
5 outer portion and an inner portion and extending radially
6 inwardly from said outer portion to said inner portion, said
7 inner portion of said elastic plate [member] being fastened
8 to a shaft end of said crankshaft [driving shaft];

9 an annular flywheel body [member] (5) comprising an
10 outer portion and an inner portion and extending radially
11 inwardly from said outer portion to said inner portion of

12 said flywheel body [member], said outer portion of said
13 flywheel body [member] being fastened to said outer portion
14 of said elastic plate [member], said inner portion of said
15 flywheel body [member] comprising a central circular hole;
16 and

17 a reinforcing member (4) comprising a cylindrical
18 portion (4a) axially extending from a first member end to a
19 second member end, an inner portion extending radially
20 inwardly from said first member end of said cylindrical
21 portion, and an outward flange (4b) extending radially
22 outwardly from said second member end of said cylindrical
23 portion, said inner portion of said reinforcing member being
24 fastened to said shaft end of said crankshaft [driving
25 shaft], said cylindrical portion of said reinforcing member
26 being fit in said circular hole of said flywheel body
27 [member] with a clearance to form a loose fit;

28 wherein said inner portion of said elastic plate
29 [member] is fixedly clamped between said shaft end of said
30 crankshaft [driving shaft] and said inner portion of said
31 reinforcing member, said inner portion of said flywheel body
32 [member] is [loosely] fit over said cylindrical portion of
33 said reinforcing member and located axially between said
34 inner portion of said elastic plate [member] and said

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35 outward flange of said reinforcing member, said outward
36 flange is axially spaced from said inner portion of said
37 elastic plate [member] at an axial distance which allows
38 axial movement of said inner portion of said flywheel body
39 between said inner portion of said elastic plate [member]
40 and said outward flange of said reinforcing member.

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1 10. (Amended) A flywheel assembly according to claim
2 9 [3], wherein said elastic plate [member] has an axial
3 rigidity which is in the range of 600 kg/mm to 2200 kg/mm.

1 11. (Amended) A flywheel assembly according to claim
2 9, wherein a wall thickness of said inner portion of said
3 reinforcing member is greater than a wall thickness of each
4 of said outward flange[s] of said reinforcing member and
5 said inner portion of said elastic plate [member], said wall
6 thickness of each of said inner portion and said outward
7 flange of said reinforcing member and said inner portion of
8 said elastic plate [member] being a dimension measured in an
9 axial direction parallel to an axis of said crankshaft
10 [driving shaft].

1 12. (Amended) A flywheel assembly according to claim

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9, further comprising a first fastening means for fastening said outer portions of said elastic plate [member] and said flywheel body [member] together, and a second fastening means for fastening said inner portions of said elastic plate [member] and said reinforcing member to said shaft end of said crankshaft [driving shaft], each of said first and second fastening means comprises screw fasteners extending axially along an axis of said crankshaft [driving shaft].

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16. (Amended) A flywheel assembly for a power transmission system for transmitting engine torque, comprising:

a crankshaft;

an elastic plate comprising an inner portion secured to a shaft end of said crankshaft;

a flywheel body secured to said elastic plate and having an engaging surface for engaging with a clutch disc;

and

a reinforcing member for reinforcing said elastic plate at said inner portion of said elastic plate;

wherein said elastic plate has an axial rigidity in the range of 600 kg/mm to 2200 kg/mm so as to ensure transmission of engine torque through said flywheel

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15 assembly, while decreasing noise produced by a bending
16 vibration of said crankshaft; and
17 wherein said elastic plate is clamped axially between
18 said reinforcing member and said shaft end of said
19 crankshaft.

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28. (Amended) A flywheel assembly as set forth in
claim 16, wherein an axial run-out of said engaging surface
when rotated by said crankshaft is no more than 0.1 mm.

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31. (Amended) A flywheel assembly for a power
transmission system for transmitting engine torque,
comprising:
4 a crankshaft;
5 an elastic plate comprising an inner portion secured to
6 a shaft end of said crankshaft;
7 a flywheel body secured to said elastic plate and
8 having an engaging surface for engaging with a clutch disc;
9 and
10 a reinforcing member for reinforcing said elastic plate
11 at said inner portion of said elastic plate;
12 wherein said engaging surface has an axial run-out
13 which is no more than 0.1 mm; and